

Work Order ID 151650

\*151650\*

Page 1

Wednesday, October 05, 2016 3:08:47 PM

Item ID: D117-762-041

Accept

\*N900040100\*

Setup Start \*NS1\*

Revision ID:

Item Name: Replacement Skidtube

Stop \*NS2\*

Start Date: 9/23/2016 Start Qty: 1.00

\*1\*

Cust Item ID:

Required Date: 10/5/2016 Req'd Qty: 1.00

\*1\*

Customer:

Reference:

Approvals: Process Plan: **DAS 21 9-89** Date: OCT 06 2016 Tooling: \_\_\_\_\_ Date: \_\_\_\_\_  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start \*NR1\*

Stop \*NR2\*

| Sequence ID/<br>Work Center ID | Operation<br>Description | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| Draw Nbr                       | Revision Nbr             |                      |         |        |              |               |               |                  |                |
| D3582                          | C                        |                      |         |        |              |               |               |                  |                |

100 Document Control 0.00

\*100\*

DOCUMENT CONTROL

DC

Memo

0.00

Doc.Control -USB or Paperwork

Photocopy bluefile & type labels per PPP D117-762-041 CHG002

N/A **DAS 21 9-89**

OCT 28 2016

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Item ID: D117-762-041

Accept

**\*N900040100\***Setup Start **\*NS1\***

Revision ID:

Item Name: Replacement Skidtube

Stop **\*NS2\***

Start Date: 9/23/2016 Start Qty: 1.00

**\*1\***

Cust Item ID:

Required Date: 10/5/2016 Req'd Qty: 1.00

**\*1\***

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop **\*NR2\***

| Sequence ID/<br>Work Center ID | Operation<br>Description | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|

130

**\*130\***

Skidtubes

Skidtubes

0.00

Memo

0.20

Skidtubes

1-Cut Aft end using DT8185

2-Deburr ends

3-Drill Aft Cap holes using DT8678 \*\*\* OPEN AFT CAP HOLE TO .187" \*\*\*

4-Locate DT 8973 from aft cap holes &amp; Drill Ground wire hole on top of Tube.

5-Install 3/16 cleco in Ground wire hole ,then drill all X-Bolt holes using 3/16" drill.

6-Drill pilot holes for wearplates using DT8900

7-Open wearplate holes to Ø19/64" (0.297") as per Dwg D3582.

8- open ground wear holes to 0.391" as per section B-B

9-Open Aft Cap holes using .209" drill.

10-Drill pilot holes for section D-D and E-E. Holes must be laid out by hand. Mark out Center line and make sure that 6.65 and 5.906 measurements are respected. Double check before drilling, do not open holes to finish size.

8E16-10-213

8E16-10-17

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Item ID: D117-762-041 Accept **\*N900040100\*** Setup Start **\*NS1\***  
Revision ID: Stop **\*NS2\***  
Item Name: Replacement Skidtube  
Start Date: 9/23/2016 Start Qty: 1.00 **\*1\*** Cust Item ID:  
Required Date: 10/5/2016 Req'd Qty: 1.00 **\*1\*** Customer:  
Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

| Sequence ID/<br>Work Center ID | Operation<br>Description                                                                                               | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp                   |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------------------------|
| 140                            | Skidtubes                                                                                                              | 0.00                 |         |        |              |               |               |                  |                                  |
| <b>*140*</b>                   |                                                                                                                        |                      |         |        |              |               |               |                  |                                  |
| Skidtubes                      | Memo                                                                                                                   | 0.14                 |         |        |              |               |               |                  |                                  |
| Skidtubes                      | 1-Weld fwd cap D2964 per dwg D3582 and QSI004<br>A/R AL ROD Batch: <u>m131562/m134826</u> 786/6-10-17<br>2-Grind flush |                      |         |        |              |               |               |                  |                                  |
| 150                            | QC10- Inspect visual per QSI004- ground welds                                                                          | 0.00                 |         |        |              |               |               |                  |                                  |
| <b>*150*</b>                   |                                                                                                                        |                      |         |        |              |               |               |                  |                                  |
| QC                             | Memo                                                                                                                   | 0.00                 |         |        |              |               |               |                  |                                  |
| Quality Control                |                                                                                                                        |                      |         |        |              |               |               |                  | DAS<br>38<br>9-89<br>OCT 18 2016 |
| 160                            | QC5- Inspect part completeness to step on W/O                                                                          | 0.00                 |         |        |              |               |               |                  |                                  |
| <b>*160*</b>                   |                                                                                                                        |                      |         |        |              |               |               |                  |                                  |
| QC                             | Memo                                                                                                                   | 0.00                 |         |        |              |               |               |                  |                                  |
| Quality Control                |                                                                                                                        |                      |         |        |              |               |               |                  | DAS<br>38<br>9-89<br>OCT 18 2016 |

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Item ID: D117-762-041

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**\*N900040100\***Setup Start **\*NS1\***

Revision ID:

Item Name: Replacement Skidtube

Stop **\*NS2\***

Start Date: 9/23/2016 Start Qty: 1.00

**\*1\***

Cust Item ID:

Required Date: 10/5/2016 Req'd Qty: 1.00

**\*1\***

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop **\*NR2\***

| Sequence ID/<br>Work Center ID | Operation<br>Description                | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp                                                                      |
|--------------------------------|-----------------------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|-------------------------------------------------------------------------------------|
| 170                            | Chemical Conversion Coat per QSI005 4.1 | 0.00                 |         |        |              |               |               |                  |                                                                                     |
| <b>*170*</b>                   |                                         |                      |         |        |              |               |               |                  |                                                                                     |
| HandFinish                     | Memo                                    | 0.07                 |         |        |              | 1             | 0             | 16-10-19         |  |
| Hand Finishing                 |                                         |                      |         |        |              |               |               |                  |                                                                                     |
| 180                            | QC7-Inspect Chemical Conversion Coat    | 0.00                 |         |        |              |               |               |                  |                                                                                     |
| <b>*180*</b>                   |                                         |                      |         |        |              |               |               |                  |                                                                                     |
| QC                             | Memo                                    | 0.00                 |         |        |              | 1             | 0             | 16-10-19         |                                                                                     |
| Quality Control                |                                         |                      |         |        |              |               |               |                  |                                                                                     |

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9-89



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Item ID: D117-762-041 Accept **\*N900040100\*** Setup Start **\*NS1\***  
 Revision ID: Stop **\*NS2\***  
 Item Name: Replacement Skidtube  
 Start Date: 9/23/2016 Start Qty: 1.00 **\*1\*** Cust Item ID:  
 Required Date: 10/5/2016 Req'd Qty: 1.00 **\*1\*** Customer:  
 Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

| Sequence ID/<br>Work Center ID | Operation<br>Description                                                 | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|--------------------------------------------------------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| 190                            | Skidtubes                                                                | 0.00                 |         |        |              |               |               |                  |                |
| <b>*190*</b>                   |                                                                          |                      |         |        |              |               |               |                  |                |
| Skidtubes                      | Memo                                                                     | 0.15                 |         |        |              |               |               |                  |                |
| Skidtubes                      | 1-Open X-Bolt holes to finish size as per Dwg D3582, all sections        |                      |         |        |              |               |               |                  |                |
|                                | 2-Counter Sink X-BOLT holes as per Dwg D3582                             |                      |         |        |              |               |               |                  |                |
|                                | 3-Deburr and blow out chips from inside of tube, prep. tube for welding. |                      |         |        |              |               |               |                  |                |
|                                | 4-Bond web as per Dwg D3582 & QSI 015                                    |                      |         |        |              |               |               |                  |                |
|                                | A/R 241 Sike Flex Batch: <u>135772</u>                                   |                      |         |        |              |               |               |                  |                |
|                                | Exp Date: <u>7-02-16</u>                                                 |                      |         |        |              |               |               |                  |                |
|                                | 5-Weld x-bolt spacers(D2973) as per Dwg D3582 section B-B.               |                      |         |        |              |               |               |                  |                |
|                                | A/R AL ROD Batch: <u>M131568</u>                                         |                      |         |        |              |               |               |                  |                |
|                                | 6-Grind welds flush                                                      |                      |         |        |              |               |               |                  |                |
| 200                            | QC10- Inspect visual per QSI004- ground welds                            | 0.00                 |         |        |              |               |               |                  |                |
| <b>*200*</b>                   |                                                                          |                      |         |        |              |               |               |                  |                |
| QC                             | Memo                                                                     | 0.00                 |         |        |              |               |               |                  |                |
| Quality Control                |                                                                          |                      |         |        |              |               |               |                  |                |

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OCT 25 2016

# Work Order ID 151650

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Item ID: D117-762-041 Accept **\*N900040100\*** Setup Start **\*NS1\***  
 Revision ID: Stop **\*NS2\***  
 Item Name: Replacement Skidtube  
 Start Date: 9/23/2016 Start Qty: 1.00 **\*1\*** Cust Item ID:  
 Required Date: 10/5/2016 Req'd Qty: 1.00 **\*1\*** Customer:  
 Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

| Sequence ID/<br>Work Center ID | Operation<br>Description                                       | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|----------------------------------------------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| 210                            | QC5- Inspect part completeness to step on W/O                  | 0.00                 |         |        |              |               |               |                  |                |
| <b>*210*</b>                   |                                                                |                      |         |        |              |               |               |                  | DAS 38         |
| QC                             | Memo                                                           | 0.00                 |         |        |              |               |               |                  | OCT 25 2016    |
| Quality Control                |                                                                |                      |         |        |              |               |               |                  |                |
| 215                            | Pressure Wash per QSI005 4.3                                   | 0.00                 |         |        |              |               |               |                  |                |
| <b>*215*</b>                   |                                                                |                      |         |        |              |               |               |                  |                |
| HandFinish                     | Memo                                                           | 0.07                 |         |        |              |               |               |                  |                |
| Hand Finishing                 | Touch-up alodine as per QSI                                    |                      |         |        |              |               |               |                  |                |
| 220                            | White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum                   | 0.00                 |         |        |              |               |               |                  |                |
| <b>*220*</b>                   |                                                                |                      |         |        |              |               |               |                  |                |
| Powdercoat                     | Memo                                                           | 0.03                 |         |        |              |               |               |                  |                |
| Powder Coating                 | START TIME 8:05<br>OVEN TEMPERATURE: 220°<br>FINISH TIME: 3:35 |                      |         |        |              |               |               |                  |                |

(X1) 2016/10/25 BEB

1 16-10-2016 DAS 34 9-89

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Item ID: D117-762-041 Accept **\*N900040100\*** Setup Start **\*NS1\***  
Revision ID: Stop **\*NS2\***  
Item Name: Replacement Skidtube  
Start Date: 9/23/2016 Start Qty: 1.00 **\*1\*** Cust Item ID:  
Required Date: 10/5/2016 Req'd Qty: 1.00 **\*1\*** Customer:  
Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

| Sequence ID/<br>Work Center ID | Operation<br>Description                                               | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|------------------------------------------------------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| 230                            | QC3- Inspect Part Finish                                               | 0.00                 |         |        |              |               |               |                  |                |
| <b>*230*</b>                   |                                                                        |                      |         |        |              |               |               |                  |                |
| QC                             | Memo                                                                   | 0.00                 |         |        |              |               |               |                  |                |
| Quality Control                |                                                                        |                      |         |        |              |               |               |                  |                |
| 250                            |                                                                        | 0.00                 |         |        |              |               |               |                  |                |
| <b>*250*</b>                   | HandFinishing                                                          |                      |         |        |              |               |               |                  |                |
| HandFinish                     | Memo                                                                   | 0.26                 |         |        |              |               |               |                  |                |
| Hand Finishing                 | 1-Inspect for Foreign objects                                          |                      |         |        |              |               |               |                  |                |
|                                | 2-Install Aft cap as per Dwg D3582, Detail "C"                         |                      |         |        |              |               |               |                  |                |
|                                | A/R 241 Sika Flex Batch: <u>M135772</u>                                |                      |         |        |              |               |               |                  |                |
|                                | Exp Date: <u>17102</u>                                                 |                      |         |        |              |               |               |                  |                |
|                                | 3-Install Wearplates as per Dwg D3582,                                 |                      |         |        |              |               |               |                  |                |
|                                | Note:Install Bolt and washer on Ground Wire inserts on top of tube see |                      |         |        |              |               |               |                  |                |
|                                | section D-D of dwg D3582                                               |                      |         |        |              |               |               |                  |                |
|                                | *****Do not install bolts where indicated on Dwg(Note #6)*****         |                      |         |        |              |               |               |                  |                |
|                                | A/R 241 Sika Flex Batch: <u>M135772</u>                                |                      |         |        |              |               |               |                  |                |
|                                | Exp Date: <u>17102</u>                                                 |                      |         |        |              |               |               |                  |                |
|                                | 4- Wing Walk as per Dwg D3582 and QSI 005 4.4                          |                      |         |        |              |               |               |                  |                |

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Item ID: D117-762-041

Accept

**\*N900040100\***

Setup Start

**\*NS1\***

Revision ID:

Item Name: Replacement Skidtube

Stop

**\*NS2\***

Start Date: 9/23/2016 Start Qty: 1.00

**\*1\***

Cust Item ID:

Required Date: 10/5/2016 Req'd Qty: 1.00

**\*1\***

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start

**\*NR1\***

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop

**\*NR2\***

| Sequence ID/<br>Work Center ID                | Operation<br>Description                                                                           | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp                    |
|-----------------------------------------------|----------------------------------------------------------------------------------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|-----------------------------------|
| 260<br><b>*260*</b><br>QC<br>Quality Control  | QC5- Inspect part completeness to step on W/O<br><br>Memo                                          | 0.00<br><br>0.00     |         |        |              |               |               |                  | DAS<br>38<br>9-89<br>OCT 2 8 2016 |
| 270<br><b>*270*</b><br>Packaging<br>Packaging | Packaging<br><br>Memo<br>Identify and pack for shipping as per PPP D117-762-041<br>Location :FG081 | 0.00<br><br>0.00     |         |        |              |               |               |                  | DAS<br>6<br>9-89<br>OCT 2 8 2016  |
| 280<br><b>*280*</b><br>QC<br>Quality Control  | QC21- Final Inspection - Work Order Release<br><br>Memo                                            | 0.00<br><br>0.02     |         |        |              |               |               |                  | DAS<br>21<br>9-89<br>OCT 2 8 2016 |

DAS  
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9-89

OCT 2 8 2016



# Picklist Print

Wednesday, October 05, 2016 3:08:46 PM

Page 1

Work Order ID: 151650

**\*151650\***

Parent Item: D117-762-041

**\*D117-762-041\***

Parent Item Name: Replacement Skidtube

Start Date: 9/23/2016

Required Date: 10/5/2016

Start Qty: 1.00

Required Qty: 1.00

## Comments:

IPP Rev:A07.06.11New Issue EC  
IPP Rev:B 08-02-22 change to revA as per dwg DD verF by:EC IPP REV:C  
15.06.11 AS PER CHG002 DD VERF:JLM IPP REV:D 16.02.05  
DWG REV.C (ecn16-514) DD VERF:JLM

| Component Item ID/<br>Item Name | Replacement<br>Item ID | Mfg/<br>Purch | Bin<br>Item | Primary<br>Location | Last<br>Location | Route<br>Seq ID | Unit of<br>Measure | Qty on<br>Hand | Qty per Kit | Total<br>Qty | Qty<br>Issued | Date<br>Issued | Status |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|

D3582-1-BENT

Manufactured

No

130

Each

3.0000

1

1

**\*D3582-1-BENT\***

Skidtube Assembly BK117

\*\*

BE 16-10-13

### Location

### Loc Qty

### Loc Code

LG002

3

148516

3

D2964

Manufactured

No

140

Each

7.0000

1

1

**\*D2964\***

Cap

\*\*

BE 16-10-17

### Location

### Loc Qty

### Loc Code

LG001

7

144041

7

D2965

Manufactured

No

250

Each

60.0000

1

1

**\*D2965\***

Cap

\*\*

BE 16-10-20

### Location

### Loc Qty

### Loc Code

FP001

60

127852

60

D2971

Manufactured

No

190

Each

9.0000

1

1

**\*D2971\***

Cross Bolt Spacer

\*\*

BE 16-10-20

### Location

### Loc Qty

### Loc Code

LG001

9

108778

9

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Parent Item: D117-762-041

**\*D117-762-041\***

Parent Item Name: Replacement Skidtube

Start Date: 9/23/2016

Required Date: 10/5/2016

Start Qty: 1.00

Required Qty: 1.00

D2973

Manufactured No

190

Each

58.0000

2

2

**\*D2973\***

Cross Bolt Spacer

**\*\***

*BE16-10-20*

Location

Loc Qty

Loc Code

LG001

58

122939

2

144627

56

D3584-1

Manufactured No

190

Each

3.0000

1

1

**\*D3584-1\***

Web

**\*\***

Location

Loc Qty

Loc Code

LG002

3

148661

3

D3662-3

Manufactured No

190

Each

76.0000

1

1

**\*D3662-3\***

Crossbolt Spacer

**\*\***

*16-10-19 DI*

*BE16-10-20*

Location

Loc Qty

Loc Code

LG001

76

105725

23

71026

6

81606

47

D3662-1

Manufactured No

190

Each

22.0000

3

3

**\*D3662-1\***

Crossbolt Spacer

**\*\***

*BE16-10-20*

Location

Loc Qty

Loc Code

LG001

22

143517

22

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Shop Packet Print

Page 2

# Picklist Brint

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**\*151650\***

Parent Item: D117-762-041

**\*D117-762-041\***

Parent Item Name: Replacement Skidtube

Start Date: 9/23/2016

Required Date: 10/5/2016

Start Qty: 1.00

Required Qty: 1.00

ALS4-1032-130 AEIS4-1032-130 Purchased

No

Each

4,993.000

36

**\*AI S4-1032-130\***

**\*\***

Rivnut

*ll 16/10/26*

Location

Loc Qty

Loc Code

CCK004

4364

M135442

4364

FG

50

FG

M135442

50

FP001

171

M133077

122

M134502

49

ST556

408

M135442

408

*x36*

ALS4-428-165

Purchased

No

Each

47.0000

2

**\*AI S4-428-165\***

**\*\***

INSERT

*ll 16/10/26*

Location

Loc Qty

Loc Code

FG

10

117769

10

FP001

37

117769

37

*x2*

D3508-3

Manufactured

No

250

Each

5.0000

1

1

**\*D3508-3\***

**\*\***

Wearplate Fwd Center

*ll 16/10/26*

Location

Loc Qty

Loc Code

FP002

5

144501

1

150257

4

*x1*

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Shop Packet Print

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**Picklist Print**

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Work Order ID: 151650

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Parent Item: D117-762-041

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Parent Item Name: Replacement Skidtube

Start Date: 9/23/2016

Required Date: 10/5/2016

Start Qty: 1.00

Required Qty: 1.00

D3508-9

Manufactured No

250

Each

5.0000

1

1

**\*D3508-9\***

Wearplate Fwd

\*\*

JL 10/10/26

LocationLoc QtyLoc Code

FP001

5

148663

5

X1

D3558-3

Manufactured No

250

Each

24.0000

1

1

**\*D3558-3\***

Gasket Center Fwd

\*\*

JL 10/10/26

LocationLoc QtyLoc Code

FG

1

89649

1

FP001

23

144377

23

X1

D3558-9

Manufactured No

250

Each

14.0000

1

1

**\*D3558-9\***

Gasket Fwd

\*\*

JL 10/10/26

LocationLoc QtyLoc Code

FG

1

80340

1

FP001

13

148742

13

X1

D3558-11

Manufactured No

250

Each

14.0000

1

1

**\*D3558-11\***

Gasket Aft Center

\*\*

JL 10/10/26

LocationLoc QtyLoc Code

FG

1

80339

1

FP001

13

148716

13

X1

Wednesday, October 05, 2016 3:08:47 PM

Shop Packet Print

Page 4



# Picklist Print

Wednesday, October 05, 2016 3:08:47 PM

Page 5

Work Order ID: 151650

**\*151650\***

Parent Item: D117-762-041

**\*D117-762-041\***

Parent Item Name: Replacement Skidtube

Start Date: 9/23/2016

Required Date: 10/5/2016

Start Qty: 1.00

Required Qty: 1.00

D3558-13

Manufactured No

250

Each

10.0000

1

1

**\*D3558-13\***

Gasket Aft

**\*\***

*ll 16110121*

Location

Loc Qty

Loc Code

FG

1

82380

1

FP001

9

138669

9

*x1*

D3508-11

Manufactured No

250

Each

5.0000

1

1

**\*D3508-11\***

Wearplate Aft Center

**\*\***

*ll 16110121*

Location

Loc Qty

Loc Code

FP002

5

148603

5

*x1*

D3508-13

Manufactured No

250

Each

16.0000

1

1

**\*D3508-13\***

Wearplate Aft

**\*\***

*ll 16110121*

Location

Loc Qty

Loc Code

FP001

16

143628

16

*x1*

# Picklist Print

Wednesday, October 05, 2016 3:08:47 PM

Page 6

Work Order ID: 151650

**\*151650\***

Parent Item: D117-762-041

**\*D117-762-041\***

Parent Item Name: Replacement Skidtube

Start Date: 9/23/2016

Required Date: 10/5/2016

Start Qty: 1.00

Required Qty: 1.00

NAS1149D0332J

Purchased

No

250

Each

1,313.000

2

2

**\*NAS1149D0332.J\***

**\*\***

*del 10/10/2016*

Washer

Location

Loc Qty

Loc Code

CA

6

m129682

6

FP001

198

m134848

198

GA

274

m134848

274

ST260a

600

m135672

600

ST264

235

m135536

31

m135566

204

*AZ*

# Picklist Print

Wednesday, October 05, 2016 3:08:47 PM

Page 7

Work Order ID: 151650

**\*151650\***

Parent Item: D117-762-041

**\*D117-762-041\***

Parent Item Name: Replacement Skidtube

Start Date: 9/23/2016

Required Date: 10/5/2016

Start Qty: 1.00

Required Qty: 1.00

AN3C4A

Purchased

No

250

Each

1,568.000

28

28

**\*AN3C4A\***

**\*\***

*all 10/10/26*

Bolt

Location

Loc Qty

Loc Code

|         |      |             |
|---------|------|-------------|
| FG      | 20   |             |
| 122814  | 20   |             |
| FP001   | 524  |             |
| M133440 | 7    |             |
| M134396 | 41   |             |
| M134509 | 6    |             |
| M134606 | 29   |             |
| M134676 | 44   |             |
| M134762 | 106  |             |
| M134861 | 13   |             |
| M135058 | 204  |             |
| M135127 | 22   |             |
| M135297 | 52   |             |
| OVER002 | 1000 |             |
| M135127 | 0    |             |
| M135297 | 0    |             |
| M135442 | 500  |             |
| M135704 | 250  | <i>X 28</i> |
| M135774 | 250  |             |
| ST350   | 24   |             |
| M134134 | 7    |             |
| M134396 | 17   |             |

# Picklist Print

Wednesday, October 05, 2016 3:08:47 PM

Page 8

Work Order ID: 151650

**\*151650\***

Parent Item: D117-762-041

**\*D117-762-041\***

Parent Item Name: Replacement Skidtube

Start Date: 9/23/2016

Required Date: 10/5/2016

Start Qty: 1.00

Required Qty: 1.00

AN3C5A

Purchased

No

250

Each

1,170.000

2

2

**\*AN3C5A\***

**\*\***

Bolt

*10/10/2016*

Location

Loc Qty

Loc Code

FG 5

122800 5

FP001 351

M135297 351

OVER002 600

M135442 200

M135603 400

ST350 214

M134676 214

*x2*

NAS1149D0416J

Purchased

No

250

Each

3,723.000

2

2

**\*NAS1149D0416.J\***

**\*\***

WASHER

*10/10/2016*

Location

Loc Qty

Loc Code

GA 45

m131511 45

ST260a 1976

m131511 1976

ST264 1702

m131511 1702

*x2*



# Picklist Print

Wednesday, October 05, 2016 3:08:47 PM

Page 9

Work Order ID: 151650

**\*151650\***

Parent Item: D117-762-041

**\*D117-762-041\***

Parent Item Name: Replacement Skidtube

Start Date: 9/23/2016

Required Date: 10/5/2016

Start Qty: 1.00

Required Qty: 1.00

NAS1149C0332R

Purchased

No

250

Each

4,277.000

28

28

**\*NAS1149C0332R\***

WASHER

\*\*

*all 10/10/2016*

Location

Loc Qty

Loc Code

FP001

656

m135274

656

GA

86

m133284

86

ST260a

2000

m135466

1000

m135672

1000

ST266

1535

m134736

85

m135408

950

m135766

500

AN4-4A

Purchased

No

250

Each

103.0000

2

2

**\*AN4-4A\***

BOLT

\*\*

*all 10/10/2016*

Location

Loc Qty

Loc Code

ST346

103

m129390

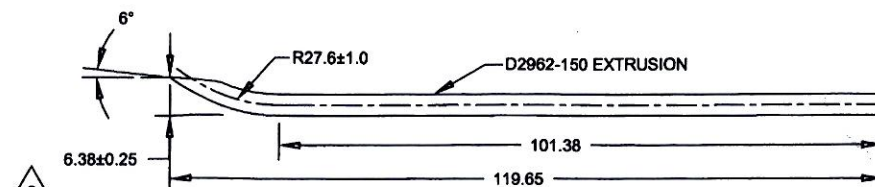
103

# **PARTS LIST FOR D3582-041 SKIDTUBE ASSEMBLY**

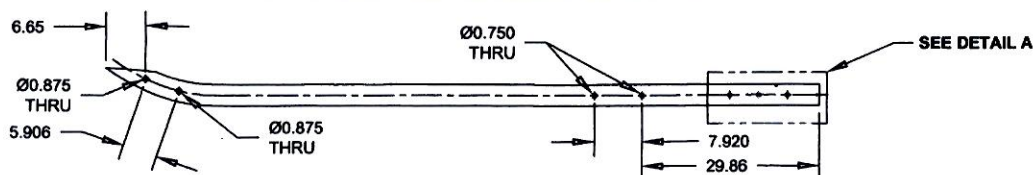
| Qty | Part Number   | Description          |
|-----|---------------|----------------------|
| X   | D3582-041     | SKIDTUBE ASSEMBLY    |
| 1   | D2962-150     | EXTRUSION            |
| 1   | D2964         | CAP                  |
| 1   | D2965         | CAP                  |
| 1   | D2971         | CROSS BOLT SPACER    |
| 2   | D2973         | CROSS BOLT SPACER    |
| 1   | D3508-3       | WEARPLATE            |
| 1   | D3508-9       | WEARPLATE            |
| 1   | D3508-11      | WEARPLATE            |
| 1   | D3508-13      | WEARPLATE            |
| 1   | D3558-3       | GASKET               |
| 1   | D3558-9       | GASKET               |
| 1   | D3558-11      | GASKET               |
| 1   | D3558-13      | GASKET               |
| 1   | D3584-1       | WEB                  |
| 3   | D3662-1       | CROSS BOLT SPACER    |
| 1   | D3662-3       | CROSS BOLT SPACER    |
| 36  | AELS-1032-130 | INSERT               |
| 2   | ALS7-428-165  | INSERT               |
| 28  | AN3C4A        | BOLT                 |
| 2   | AN3-5A        | BOLT                 |
| 2   | AN4-4A        | BOLT                 |
| 28  | NAS1149C0332R | WASHER (AN960C10L)   |
| 2   | NAS1149D0332J | WASHER (AN960JD10L)  |
| 2   | NAS1149D0416J | WASHER (AN960JD416L) |

## **NOTES:**

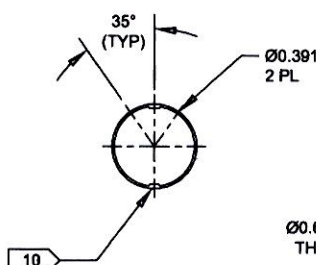
- 1) MATERIAL: N/A
- 2) FINISH: CHEMICAL CONVERSION COAT PER QSI 005 4.1 PRIOR TO INSERTING D3584-1 WEB. POWDER COAT ASSEMBLY GLOSS WHITE (REF 4.3.5.1) PER DART QSI 005 4.3. ANTI-SKID PAINT AS INDICATED TO 1.00 ABOVE CENTER LINE PER DART QSI 005 4.4
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED.
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 17.5 lbs
- 8) WELDING: PER DART QSI 004.
- 9) INSERT D3584-1 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/291 ADHESIVE PER DART QSI 015 AFTER BENDING.
- 10) USE DART DRILL TEMPLATE DT8900 TO LOCATE AND DRILL Ø0.297 HOLES (36 PLACES) FOR WEARSHOE INSERTS. INSTALL AELS-1032-130 PER SECTION G-G (36 PLACES) AFTER FINISH. SEAL WEARPLATE BOLTS WITH SIKAFLEX-241/291.
- 11) DO NOT INSTALL AN3C4A BOLTS AND NAS1149C0332R WASHERS IN INDICATED LOCATIONS.



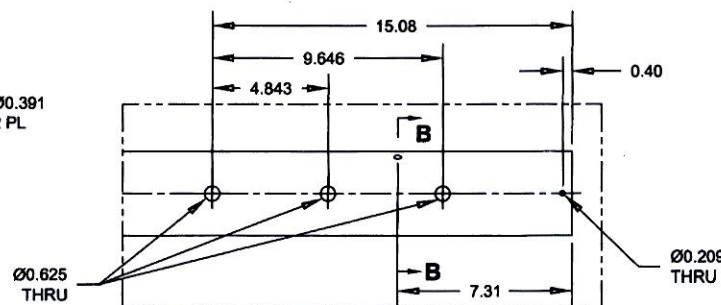
**D3582-1 BENDING AND CUTTING DETAIL**



**D3582-1 DRILLING DETAIL**



**SECTION B-B**  
SCALE 5X



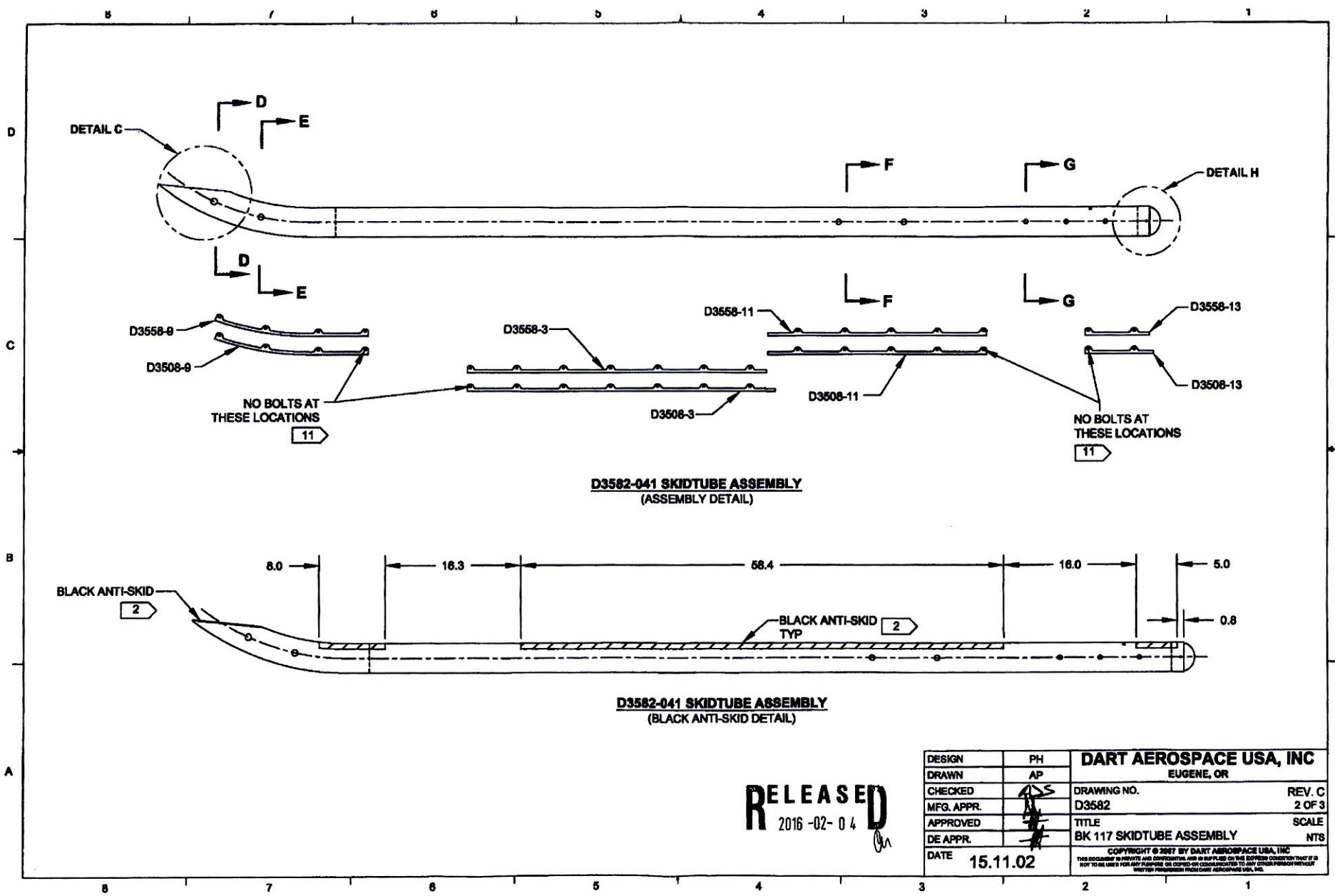
**DETAIL A**  
SCALE 5X

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER

NO. 151650 MJS  
16-10-06

RELEASED  
2016-02-04  
ECN 16-514

|            |                                                                                        |                                                                                                                                                                                                                                                                                    |          |
|------------|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| C          | D3492 PLUG ASSEMBLIES REMOVED. REFORMAT NOTES SHT 1                                    | AP                                                                                                                                                                                                                                                                                 | 15.11.02 |
| B          | 29.86 WAS 29.87 (ZN C2-1), INCORPORATED DEO D3582-A-1 (ZN D5-1), FORMAT TO CURRENT STD | RF                                                                                                                                                                                                                                                                                 | 15.02.20 |
| A          | NEW ISSUE                                                                              | PH                                                                                                                                                                                                                                                                                 | 07.06.08 |
| REV.       | DESCRIPTION                                                                            | BY                                                                                                                                                                                                                                                                                 | DATE     |
| DESIGN     | PH                                                                                     | <b>DART AEROSPACE USA, INC</b><br>EUGENE, OR                                                                                                                                                                                                                                       |          |
| DRAWN      | AP                                                                                     |                                                                                                                                                                                                                                                                                    |          |
| CHECKED    | DS                                                                                     | DRAWING NO.                                                                                                                                                                                                                                                                        | REV. C   |
| MFG. APPR. | DS                                                                                     | D3582                                                                                                                                                                                                                                                                              | 1 OF 3   |
| APPROVED   | DS                                                                                     | TITLE                                                                                                                                                                                                                                                                              | SCALE    |
| DE APPR.   | DS                                                                                     | BK 117 SKIDTUBE ASSEMBLY                                                                                                                                                                                                                                                           | NTS      |
| DATE       | 15.11.02                                                                               | COPYRIGHT © 2007 BY DART AEROSPACE USA, INC<br>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC. |          |

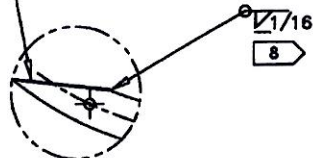


RELEASED  
2016-02-04

|            |                    |                                                                                                                                                                                                                                                                                                  |        |
|------------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| DESIGN     | PH                 | <b>DART AEROSPACE USA, INC</b>                                                                                                                                                                                                                                                                   |        |
| DRAWN      | AP                 | EUGENE, OR                                                                                                                                                                                                                                                                                       |        |
| CHECKED    | <i>[Signature]</i> | DRAWING NO. D3582                                                                                                                                                                                                                                                                                | REV. C |
| MFG. APPR. | <i>[Signature]</i> |                                                                                                                                                                                                                                                                                                  | 2 OF 3 |
| APPROVED   | <i>[Signature]</i> | TITLE                                                                                                                                                                                                                                                                                            | SCALE  |
| DE APPR.   | <i>[Signature]</i> | BK 117 SKIDTUBE ASSEMBLY                                                                                                                                                                                                                                                                         | NTS    |
| DATE       | 15.11.02           | <small>COPYRIGHT © 2007 BY DART AEROSPACE USA, INC<br/>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS UNDERSTANDING THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMPILED OR REPRODUCED IN ANY MANNER WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small> |        |

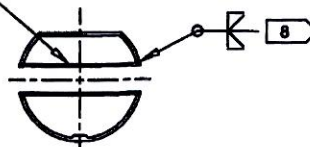


D2964 CAP  
(GRIND FLUSH)



**DETAIL C**

D2971 SPACER



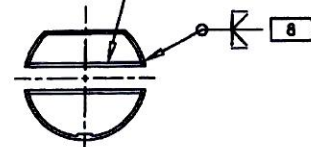
**SECTION D-D**

SCALE 3X

**SECTION D-D NOTES**

- AFTER BENDING AND DRILLING ASSEMBLY  
PERFORM THE FOLLOWING:
1. CHAMFER HOLE 0.030 x 45°
  2. INSERT D2971 SPACER
  3. WELD INTO PLACE AND GRIND FLUSH
  4. PASS Ø0.750 DRILL TO REMOVE SPILL OVER

D3662-3 SPACER



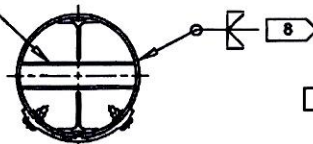
**SECTION E-E**

SCALE 3X

**SECTION E-E NOTES**

- AFTER BENDING AND DRILLING ASSEMBLY  
PERFORM THE FOLLOWING:
1. CHAMFER HOLE 0.030 x 45°
  2. INSERT D3662-3 SPACER
  3. WELD INTO PLACE AND GRIND FLUSH
  4. PASS Ø0.672 DRILL TO REMOVE SPILL OVER

D2973 SPACER  
2 PL



**SECTION F-F**

SCALE 3X

**SECTION F-F NOTES**

- AFTER BENDING AND DRILLING ASSEMBLY  
PERFORM THE FOLLOWING:
1. CHAMFER HOLE 0.030 x 45°
  2. INSERT D2973 SPACER (2 PLACES)
  3. WELD INTO PLACE AND GRIND FLUSH
  4. PASS Ø0.625 DRILL TO REMOVE SPILL OVER

D3584-1 WEB  
REF

D3662-1 SPACER  
3 PL

10 AFTER FINISH, INSTALL  
AELS-1032-130  
INSERT 36 PL

AN3C4A BOLT (1)  
NAS1149C0332R WASHER (1)  
28 PL

**SECTION G-G**

SCALE 3X

**SECTION G-G NOTES**

- AFTER BENDING AND DRILLING ASSEMBLY  
PERFORM THE FOLLOWING:
1. CHAMFER HOLE 0.030 x 45°
  2. INSERT D3662-1 SPACER (3 PLACES)
  3. WELD INTO PLACE AND GRIND FLUSH
  4. PASS Ø0.515 DRILL TO REMOVE SPILL OVER

AFTER FINISH, INSTALL  
ALS7-428-165 INSERT (1)  
AN4-4A BOLT (1)  
NAS1149D0416J WASHER (1)  
2 PL

D3584-1 WEB  
REF

SEAL WITH  
SIKAFLEX -241/-291

AN3-5A BOLT (1)  
NAS1149D0332J WASHER (1)  
2 PL

**DETAIL H**

|            |          |                                                                                                                                                                                                                                                                                      |        |
|------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| DESIGN     | PH       | <b>DART AEROSPACE USA, INC</b>                                                                                                                                                                                                                                                       |        |
| DRAWN      | RF       | EUGENE, OR                                                                                                                                                                                                                                                                           |        |
| CHECKED    | ASS      | DRAWING NO.                                                                                                                                                                                                                                                                          | REV. C |
| MFG. APPR. | BA       | D3582                                                                                                                                                                                                                                                                                | 3 OF 3 |
| APPROVED   | RF       | TITLE                                                                                                                                                                                                                                                                                | SCALE  |
| DE APPR.   | RF       | BK 117 SKIDTUBE ASSEMBLY                                                                                                                                                                                                                                                             | NTS    |
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